

I CLAIM:

Patent Claims

1. A valve arrangement for the pilot control of a first and second hydraulically actuatable directional valve (10, 11), each of which is proportionally adjustable out of a neutral position by subjecting a first control chamber (15, 16) to the action of a control pressure in the first direction and by subjecting a second control chamber (17, 18) to the action of a control pressure in a second direction, having a proportionally adjustable pilot control pressure valve (25) with a control output (30) at which a control pressure of different values can be set, and having a switching valve arrangement (35) via which, in a first switching position, the first control chamber (15) of the first directional valve (10) can be connected to the control output (30) of the pilot control pressure valve (25) and the first control chamber (16) of the second directional valve (11) can be relieved of pressure and, in a second switching position, the first control chamber (16) of the second directional valve (11) can be connected to the control output (30) of the pilot control pressure valve (25) and the first control chamber (15) of the first directional valve (10) can be relieved of pressure, characterized in that a second switching valve arrangement (37) is present, via which, in a first switching position, the second control chambers (17, 18) of the two directional

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valves (10, 11) are jointly connected to the control output (30) of the pilot control pressure valve (25) and via which, in a second switching position, the second control chambers (17, 18) of the two directional valves (10, 11) are jointly relieved of pressure.

2. The valve arrangement as claimed in claim 1, characterized in that the first switching valve arrangement (35) is formed by a first and second 3/2-way directional switching valve (40, 41) and in that, via the first switching valve (40), the first control chamber (15) of the first directional valve (10) and, via the second switching valve (41), the first control chamber (16) of the second directional valve (11) can be connected to the control output (30) of the pilot control pressure valve (25) or to a tank (13).
3. The valve arrangement as claimed in claim 1, characterized in that the first switching valve arrangement (35) is formed by a single directional switching valve (45) via which, in a first switching position, the first control chamber (15) of the first directional valve (10) is connected to the control output (30) of the pilot control pressure valve (25) and the first control chamber (16) of the second directional valve (11) is connected to the tank (13) and, in a second switching position, the first control chamber

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(16) of the second directional valve (11) is connected to the control output (30) of the pilot control pressure valve (25) and the first control chamber (16) of the first directional valve (10) is connected to the tank (13).

4. The valve arrangement as claimed in claim 3, characterized in that the directional switching valve (45) forming the first switching valve arrangement (35) has precisely two switching positions.
5. The valve arrangement as claimed in one of claims 2 to 4, characterized in that the directional switching valves (430, 41, 45) adopt one switching position under the action of a spring (38, 46) and can be switched to the other switching position by solenoids (42, 43, 47).
6. The valve arrangement as claimed in one of the preceding claims, characterized in that the pilot control pressure valve (25) is proportionally adjustable by a solenoid (26).
7. The valve arrangement as claimed in one of the preceding claims, characterized in that it comprises a manually actuatable pilot control device (15) which possesses a handle (49) which can be pivoted to guide the directional valves (10, 11) out of a neutral position in

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various directions, and in that the first switching arrangement (35) and the second switching arrangement (37) are non-arbitrarily switched as a function of the pivot direction of the handle (49).

8. The valve arrangement as claimed in claim 7, characterized in that electrical switches (58, 59, 60, 61, 62, 63) which can be selectively actuated as a function of the pivot direction of the handle (49) are accommodated in the pilot control device (50) and the electrical setting members (39, 42, 43, 47) of the switching valve arrangements (35, 37) can be switched thereby.
9. The valve arrangement as claimed in one of claims 1 to 7, characterized in that it comprises a manually actuatable pilot control device (50), which possesses a handle (49) which, in order to generate a constantly changing control signal, can be pivoted out of a neutral position in various directions, in that the pilot control pressure valve (25) is proportionally adjustable electrically and in that the electrical setting member (26) of the pilot control pressure valve (25) can be controlled proportionally as a function of the value of the control signal, and the electrical setting members (39, 42, 43, 47) of the switching valve arrangements (35, 37) can be controlled as a function of the state of

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the control signal relative to a reference value assumed
in the neutral position of the handle (49).

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